

(19) World Intellectual Property
Organization
International Bureau



PCT

Rec'd PCT/PTO 20 JAN 2005



10/522448

(10) International Publication Number
WO 2004/039470 A3

(43) International Publication Date
13 May 2004 (13.05.2004)

(51) International Patent Classification⁷: B01D 1/00, 3/08

(21) International Application Number:

PCT/GB2003/004683

(22) International Filing Date: 29 October 2003 (29.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

0225335.9 31 October 2002 (31.10.2002) GB

(71) Applicant (for all designated States except US):
GENEVAC LTD [GB/GB]; Sovereign House, Far-
thing Road, Ipswich, Suffolk IP1 5AP (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LEE-SMITH,
Roger [GB/GB]; 17a The Green, Hadleigh, Suffolk IP7
6AE (GB). SMITH, Richard [GB/GB]; 36 Ramsgate
Drive, Ipswich, Suffolk IP3 9DD (GB). GUTHRIE,
Duncan [GB/GB]; Wren Cottage, Tye Green, Alpheton,
Nr Sudbury, Suffolk CO10 9BW (GB).

(74) Agent: Keith W Nash & Co; 90-92 Regent Street, Cam-
bridge, CB2 1DP (GB).

(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG,
SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN,
YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
18 November 2004

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: TEMPERATURE SENSING IN CENTRIFUGAL EVAPORATORS

(57) Abstract: A centrifugal evaporator is described comprising a chamber in which sample containers are carried and rotated by a rotor and are pivotally mounted so as to swing up into a horizontal attitude as the rotor rotates. The evaporator includes an infra red source to direct infra red radiation towards the rotor and the sample containers carried thereon, to heat at least the latter and any sample material therein. A non-contact temperature sensing infra red pyrometer having a sensor with a defined field of view is mounted in the chamber, such that while the rotor as such is substantially out of its field of view, each sample container at least partly occupies the pyrometer field of view for a part of each rotation of the rotor. The positions of the infrared source and the pyrometer components are selected so that the radiation from the infra red source does not impinge on the pyrometer sensor.



WO 2004/039470 A3

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04683

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B01D1/00 B01D3/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 345 882 A (INSTRUMENTATION LABORATORY) 13 December 1989 (1989-12-13) the whole document	1
A	WO 01/66212 A (GENEVAC LTD.) 13 September 2001 (2001-09-13) page 6, line 5 - line 9; claim 1; figure 1	1
A	GB 2 334 688 A (GENEVAC LTD.) 1 September 1999 (1999-09-01) cited in the application abstract	1
	----- -/-- -----	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- * & * document member of the same patent family

Date of the actual completion of the international search

25 August 2004

Date of mailing of the international search report

01/09/2004

Name and mailing address of the ISA
European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Bertram, H

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 03/04683

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PATENT ABSTRACTS OF JAPAN vol. 17, no. 506, 13 September 1993 (1993-09-13) & JP 05 138075 A (HITACHI KOKI CO), 1 June 1993 (1993-06-01) cited in the application abstract</p>	1
A	<p>PATENT ABSTRACTS OF JAPAN vol. 15, no. 511, 25 December 1991 (1991-12-25) & JP 03 221823 A (HITACHI KOKI CO), 30 September 1991 (1991-09-30) abstract</p>	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 03/04683

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0345882	A	13-12-1989	IT 1224633 B EP 0345882 A1 JP 2039212 A US 4980538 A	04-10-1990 13-12-1989 08-02-1990 25-12-1990
WO 0166212	A	13-09-2001	WO 0166212 A1 GB 2359772 A , B	13-09-2001 05-09-2001
GB 2334688	A	01-09-1999	DE 69909770 D1 DE 69909770 T2 DE 69918733 D1 DE 69918734 D1 EP 1297873 A1 EP 1297874 A1 EP 1073505 A1 GB 2363745 A , B GB 2362590 A , B WO 9943405 A1 JP 2002504413 T US 6605474 B1 US 2002094581 A1	28-08-2003 29-01-2004 19-08-2004 19-08-2004 02-04-2003 02-04-2003 07-02-2001 09-01-2002 28-11-2001 02-09-1999 12-02-2002 12-08-2003 18-07-2002
JP 05138075	A	01-06-1993	JP 3099470 B2	16-10-2000
JP 03221823	A	30-09-1991	NONE	